

Serial No. 10/043,204

May 21, 2004

Reply to the Office Action dated January 30, 2004

Page 5 of 8

### REMARKS/ARGUMENTS

Claims 1, 3-5, 7 and 9-11 are pending in this Application.

Claims 1, 3-5, 7, and 9-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicants' Admitted Prior Art Fig. 4 (AAPA) in view of Koshino (U.S. 4,683,394) or Sato et al. (JP 6-350390). Applicants respectfully traverse the rejection of claims 1, 3-5, 7, and 9-11.

Claim 1 recites:

**"A surface acoustic wave device comprising:**

**first and second longitudinally coupled resonator type surface acoustic wave filters, each of said first and second surface acoustic wave filters having a piezoelectric substrate, at least one interdigital electrode transducer disposed on the piezoelectric substrate, and at least one reflector disposed on the piezoelectric substrate;**

**a package having the first and second surface acoustic wave filters mounted therein and electrode lands electrically connected to each of the first and second surface acoustic wave filters; and**

**a plurality of bonding wires electrically connecting each of the first and second the surface acoustic wave filters to the electrode lands of the package, wherein the bonding wires are arranged so as not to pass over both of the at least one interdigital electrode transducer and the at least one reflector of either of the first and second surface acoustic wave filters; wherein**

**said at least one interdigital electrode transducer and said at least one reflector of each of the first and second surface acoustic wave filters is made of a metal having a heavier mass than that of aluminum or an alloy including the metal." (emphasis added)**

Applicants' claim 1 recites the features of "first and second longitudinally coupled resonator type surface acoustic wave filters" and "the bonding wires are arranged so as not to pass over both of the at least one interdigital electrode transducer and the at least one reflector of either of the first and second surface acoustic wave filters." Applicants' claim 7 recites features which are similar to features recited in Applicants' claim 1, including the above emphasized features. With the improved features of claims 1 and 7, Applicants have been able to provide a surface acoustic wave device in which

Serial No. 10/043,204

May 21, 2004

Reply to the Office Action dated January 30, 2004

Page 6 of 8

frequency adjustment can be performed with a high degree of precision (see, for example, the second full paragraph on page 5 of the originally filed specification).

The Examiner has admitted in the second paragraph on page 2 of the outstanding Office Action that Fig. 4 of AAPA fails to teach or suggest the feature of "the bonding wires are arranged so as not to pass over both of the at least one interdigital electrode transducer and the at least one reflector of either of the first and second surface acoustic wave filters" as recited in Applicants' claims 1 and 7. The Examiner has relied upon Koshino and Sato et al. to allegedly teach this feature.

Applicants admit that Koshino shows that the bonding wires 84 are arranged not to pass over both the interdigital electrode transducer 74 and the reflectors 75 in a single longitudinally coupled resonator type surface acoustic wave filter. Koshino clearly teaches in Figs. 10, 12, 14, 15, 17, 18, 20, 21, 23, and 25 a filter with a single stage and clearly fails to teach or suggest a filter with two or more stages. Koshino fails to provide any suggestion or teaching on how to extend the bonding wire configuration of a filter with a single stage to a filter with two or more stages as shown in Fig. 4 of AAPA.

Further, Koshino clearly teaches in Figs. 10, 12, 14, 15, 17, 18, 20, 21, 23, and 25, and recites in claims 1 and 19, that the key feature of the invention is that terminals are equally spaced from each other. Applicants respectfully submit it is this feature which results in the bonding wires 84 being arranged not to pass over both the interdigital electrode transducer 74 and the reflectors 75. Applicants respectfully submit that the Examiner has failed to explain how applying this key feature to the SAW device Fig. 4 of AAPA having first and second longitudinally coupled resonator type surface acoustic wave filters would necessarily result in the bonding wires being arranged not to pass over both the at least one interdigital electrode transducer and the at least one reflector as recited in Applicants' claims 1 and 7.

With respect Sato et al., Applicants hereby request that the Examiner provide an English language translation of Sato et al. "so that the record is clear as to the precis

Serial No. 10/043,204

May 21, 2004

Reply to the Office Action dated January 30, 2004

Page 7 of 8

facts the examiner is relying upon." MPEP § 706.02, "Reliance upon Abstracts and Foreign Language Documents in Support of a Rejection;" See also Ex parte Jones, 62 USPQ2d 1206, 1208 (Bd. Pat. App. & Inter. 2001).

Sato et al. teaches a SAW filter with two terminals and clearly fails to teach or suggest a SAW filter with more than two terminals, in particular a SAW filter with six terminals. Sato et al. fails to provide any suggestion or explanation on how to extend the bonding wire configuration of a SAW filter with only two terminals to a SAW device having six terminals as shown in Fig. 4 of AAPA. Applicants respectfully submit that the Examiner has failed to explain why one of ordinary skill in the art would have modified Fig. 4 of AAPA, with six terminals, to having the bonding wire configuration of Sato et al., with two terminals.

Sato et al. teaches a single port SAW filter in Fig. 7 that uses only two terminals 52 and 53. Applicants respectfully submit that it is this feature of Sato et al. which results in the bonding wires being arranged not to pass over both the interdigital electrode transducer  $R_{s1}$  and  $R_{s2}$  and the reflectors  $R_s$ ,  $R_{s11}$ ,  $R_{s21}$ , and  $R_{s22}$ . Please note, the bonding wires connected between pads 36-38 and 54-57 appear to be used to provide inductor 13<sub>2</sub> or 17<sub>2</sub>. Applicants respectfully submit that the Examiner has failed to explain how applying this feature to the SAW device of Fig. 4 of AAPA having six terminals 121-126 would necessarily result in the bonding wires being arranged not to pass over both the at least one interdigital electrode transducer and the at least one reflector as recited in Applicants' claims 1 and 7.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Fig. 4 of AAPA in view of Koshino or Sato et al.

Accordingly, Applicants respectfully submit that none of the prior art of record, applied alone or in combination, teaches or suggests the unique combination and arrangement of elements recited in claims 1 and 7 of the present application. Claims 3-5 depend upon claim 1 and are therefore allowable for at least the reasons that claim 1

Serial No. 10/043 204  
May 21, 2004  
Reply to the Office Action dated January 30, 2004  
Page 8 of 8

is allowable. Claims 9-11 depend upon claim 7 and are therefore allowable for at least the reasons that claim 7 is allowable.

In view of the foregoing remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: May 21, 2004



Attorneys for Applicants

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

**KEATING & BENNETT LLP**  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200  
Facsimile: (703) 385-5080